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THE PROPOSED ESTABLISHMENT OF AN ENGLISH MARINE BIOLOGICAL STATION.

On the eve of the appearance of our last number, namely, on March 31st, an important meeting of naturalists was held in the Rooms of the Royal Society, Burlington House, with the object of forming a Society for the biological investigation of the English coast, and for the erection in a suitable locality of a marine laboratory and dredging station.

The chair was taken by Professor Huxley, President of the Royal Society. Amongst those present were the Duke of Argyll, the Earl of Dalhousie, Lord Arthur Russell, Sir Lyon Playfair, M.P., Sir John Lubbock, M.P. (President of the Linnæan Society), Sir Joseph Fayrer, Sir Joseph Hooker, Sir George Nares, the Hon. E. Marjoribanks, M.P., Professor Flower (President of the Zoological Society), Prof. Ewart, Prof. Bonney, Prof. Mivart, Prof. Moseley, Dr. Spencer Cobbold, Dr. Günther, Dr. W. B. Carpenter, Prof. Crofton, Mr. H. C. Sorby, Dr. J. Murie, Dr. John Rae, Dr. J. Evans, Dr. J. Gwyn Jeffreys, Dr. P. L. Selater, Dr. Dobson, Dr. A. Geikie, Dr. Herbert Carpenter, Mr. G. J. Romanes, Prof. Jeffrey Bell, Mr. Francis Galton, Mr. S. O. Ridley, Mr. J. Quelch, Mr. Edgar Smith, Mr. Frank Crisp, Mr. Busk, Mr. Henry Lee, Mr. Dawson Williams, Mr. J. A. Blake, M.P., Mr. T. F. Braby, Mr. Thistleton Dyer, Mr. Henry Ffennell, Mr. H. Dallinger, Mr. Saville Kent, Mr. H. C. Burdett, Captain Verney, R.N., and Mr. John Murray.

Professor Huxley, after reading letters approving of the project from Lord Derby, the Marquis of Hamilton, Sir Thomas

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Dakin, M.P., Mr. Chamberlain, M.P., Mr. R. W. Duff, M.P., and Dr. Dohrn, said that the object of the proposal before the meeting was not in his hands, but in those of Professor Lankester; he expressed the desire of the Royal Society to foster an undertaking which promised well for the advancement of science. The establishment of laboratories for the study of the fauna and flora of the sea had taken place in most civilized countries in the last few years, and was, in fact, a necessary consequence of the great change which had come about in the aims of physiological science. The study of the development of animal life commenced in a serious way about half a century ago, and the ramifications of that inquiry, which had been extended to the mode of becoming of all live things by Mr. Darwin, had caused a complete change of the methods of biological science and of the way in which investigations were carried on. In order to understand the living being it was no longer considered enough, as in the days of our forefathers, to observe its outside or even to acquire a knowledge of its anatomy. They had now to understand its affinities, to trace its growth from the egg, and they were able to do this with a thoroughness and accuracy of which in his young days no one had the slightest anticipation. This was one good reason for the establishment of an institution of this kind from a purely scientific point of view. There was another, which was practical. We had great fisheries and great fishery interests, which were more or less regulated by legislation, and which were undoubtedly of very great importance to very large masses of the population. Hitherto, certainly up to within the last thirty years, such regulations had been made almost entirely haphazard, owing to a want of knowledge of the habits, mode of life, and mode of production of animals which were economically useful. At this present time it was within his knowledge that a great deal of vehement opposition to particular modes of fishing arose from ignorance of some of the primary facts concerning the mode of life of our food-fishes, and if they were to have better legislation than at present their arguments and reasonings must rest on exact and sound observation of the mode of life, mode of development, and metamorphoses of the inhabitants of the waters of our coasts. He wished to say with particular emphasis, lest there should be any misunderstanding with regard to their objects, that there was no

possibility of any rivalry or conflict of aims between the society to which he had referred and another Society of which His Royal Highness the Prince of Wales had announced the formation at the Fisheries Exhibition a few days ago. That Society was in the ordinary sense of the word practical. It would have to do with the condition of fishermen, the collection of statistics and of facts concerning food-fishes, and so forth. He sincerely trusted that when established, as he hoped they would be, so far from one being a hindrance to the other, both Societies would work in concurrence to one common end.

The Duke of Argyll then moved the following resolution:—
“That in the opinion of this meeting there is an urgent want of one or more laboratories on the British coast, similar to those existing in France, Austria, Italy, and America, where accurate researches may be carried on, leading to the improvement of zoological and botanical science, and to an increase in our knowledge as regards the food, life, conditions, and habits of British food-fishes and molluscs in particular, and the animal and vegetable resources of the sea in general.” The fact of their being called together to form a voluntary Society to carry out these objects implied a discovery on the part of those who had taken a leading part in this matter that the work was not likely to be taken up by the Government. He was afraid that in this respect the British Government had always stood rather behind those of other countries, whether Monarchical or Republican. There were other agencies by which facts about food fishes would be obtained, and he instanced the researches of the President of the Royal Society and a valuable paper recently contributed by Professor Ewart upon one of the most important questions connected with food-fishes—the spawning of the Herring. Information so obtained showed the groundless character of the opposition raised by the fishermen of Loch Fyne to a mode of fishing which they called “trawling,” which was really the use of the seine net. Believing that there were agencies which would obtain and spread information for economic purposes, he thought that in the main they should in promoting this Society look to the interest of biology as a science.

This Resolution was seconded by Sir Lyon Playfair, who in the course of his remarks suggested that it was remarkable that a country so greatly dependent upon the sea as ours should be

the last to establish such an institution. The need of such a Society as it was proposed to found had been long felt, and an attempt had been made to establish one in Scotland. Much as he should like to see a laboratory here like that of Mr. Agassiz, at Newport, in the United States, they must recollect that in order to carry out their object they had to apply to a larger public, who would look for certain direct benefits from such a laboratory as it was proposed to institute. All there knew well that beneficial applications of science came with the overflowing of the full measure of science. Speaking from observation of what had been done to promote the study of biology by the establishment of marine laboratories in the United States, where the Government made liberal contributions to their maintenance, he related some remarkable practical applications of the knowledge of food fishes obtained in the course of scientific research in that country. Thus, the Gray Cod, which had been accustomed to leave the United States coast for the Newfoundland banks in summer, were, owing to the operations of the United States Fish Commission, now gradually accumulating through the summer on the United States coast, where they were called "commission cod." Again, the periodical American Shad famines had been prevented of late by the careful observation of the temperature of the water in the bays at the spawning season, and a timely intervention to effect artificial hatching. While some might be induced to assist scientific investigation with a view to the practical application of research, those who would support this Society for the sake of science alone might be certain that discoveries which would be made, perhaps in the most unexpected way, would redound to the benefit of the human race.

The motion was supported by Lord Dalhousie and Professor Flower. Lord Dalhousie explained that, as chairman of a commission appointed to inquire into certain difficulties which have arisen between fishermen who use lines and others who fish with trawls, he felt a lively interest in the practical questions connected with the habits of fish, and he was sorry to say that ignorance on this subject was not confined to the poor fishermen on our coasts.

Dr. W. B. Carpenter then moved the following resolution:—
"That it is desirable to found a Society, having for its object the

establishment and maintenance of at least one such laboratory at a suitable point on the coast, the resources of the laboratory, its boats, fishermen, working-rooms, etc., being open to the use of all naturalists under regulations hereafter to be determined."

Sir John Lubbock, in seconding the motion, said he thought they owed their thanks to Professor Lankester for the efforts he had made to found the proposed Society. The resolution, which was supported by Dr. Günther, was passed.

Sir Joseph Hooker then moved:—"That this meeting does hereby agree to constitute itself such a Society under the title of 'The Society for the Biological Investigation of the Coasts of the United Kingdom.'"

Professor Moseley having seconded and Mr. H. C. Sorby supported this resolution, it was unanimously adopted.

On the motion of Sir William Bowman, F.R.S., it was resolved that gentlemen whose names follow be requested to act as a provisional council and report to an adjourned meeting to be held on Friday, May 30, as to the constitution and organisation of the Society and other matters, and in the meantime have power to admit suitable persons to the membership of the Society; further, that Professor Lankester be asked to act as Secretary, and Mr. Frank Crisp as Treasurer *ad interim*. Those named were the Duke of Argyll, the Earl of Dalhousie, Lord Arthur Russell, the Lord Mayor, the Prime Warden of the Fishmongers Company, the President of the Royal Society, the Presidents of the Linnæan, Zoological, and Royal Microscopical Societies, Dr. W. B. Carpenter, F.R.S., Mr. W. S. Caine, M.P., Mr. John Evans (Treasurer of the Royal Society), Dr. Albert Günther, F.R.S., Sir Joseph Hooker, F.R.S., Prof. Michael Foster (Secretary of the Royal Society), Prof. Ray Lankester, F.R.S., Prof. M. Marshall, F.R.S., Prof. Moseley, F.R.S., Mr. John Murray, F.R.S.E., the Rev. Dr. Norman, Mr. George J. Romanes, F.R.S., Prof. Burdon Sanderson, F.R.S., Dr. P. L. Sclater, F.R.S., Mr. Adam Sedgwick, F.R.S., Mr. F. Crisp, F.L.S., Mr. Thomas Christy, F.L.S., Mr. Thiselton Dyer, F.L.S., Mr. Percy Sladen, F.L.S., Mr. H. C. Sorby, F.R.S., and Mr. Charles Stewart, F.L.S.

Mr. G. J. Romanes, in seconding the motion, took occasion to observe that in his opinion one of the most important functions of the Society when formed would be that of conducting

researches upon invertebrate physiology. He was sure he would be but carrying with him the assent of all physiologists when he said that it is to the invertebrate forms of life that we must now look for the elucidation of many of the most fundamental problems connected with life-processes. It is in the Invertebrata that we meet with life in its least compounded state, and therefore in the state best suited to observation and experiment directed towards the solution of these fundamental problems. The sea is the great magazine of invertebrate life, and if the rich stores of material therein presented have been hitherto almost entirely neglected by physiologists, the explanation may be found in the fact that physiological research can only be conducted in well-equipped laboratories, which have been of but comparatively recent institution upon the sea-coasts of Europe and America.

Professor Ray Lankester then moved a vote of thanks to the President of the Royal Society for taking the chair, and said it had been estimated that from £6,000 to £10,000 would be required to start the project. He invited immediate subscriptions, payable *ad interim* to the Treasurer, Mr. Frank Crisp, 6, Old Jewry, E.C. Sir Joseph Fayrer seconded the motion, and the President having briefly replied, the meeting adjourned to May 30th.

THE ASIATIC ELEPHANT IN FREEDOM AND CAPTIVITY.

AN interesting paper on this subject was lately read by Mr. G. P. Sanderson before the Society of Arts, Sir Joseph Fayrer, M.D., K.C.I.S., F.R.S., in the chair.

As superintendent of Government elephant catching operations in Bengal for the last fifteen years, Mr. Sanderson has acquired an experience which enables him to speak authoritatively on many moot points in the natural history of the elephant, and his remarks were accordingly listened to with great attention.

He commenced by referring to the popular estimate of the elephant's intelligence, which he believed to be exaggerated; for, instead of being an exceptionally wise animal, its sagacity is of a very mediocre description. Its reasoning faculties he considered to be far below those of the dog, and in matters beyond the range of its daily experience it evinces no special discernment.

One of the strongest features in the domesticated elephant's character is its obedience, but, whilst fairly quick at comprehending anything sought to be taught it, it is decidedly wanting in originality. In support of these views, Mr. Sanderson related several cases which had come under his observation in which a want of intelligence had been displayed. He thought, however, that all who had had to deal with elephants would agree that their good qualities could not be exaggerated, that their vices are few, and only occur in exceptional animals; that they are neither treacherous nor retentive of any injury (the story of our youth of the tailor and the elephant he wholly disbelieved), and that they are obedient, gentle, and patient beyond all other domestic animals.

On the subject of height, Mr. Sanderson stated that much misapprehension exists. He had heard and read of Indian elephants 12 ft., 15 ft., and even 20 ft. high! As a matter of fact, he had found that 10 ft. in males and 8 ft. 6 in. in females (vertical height at the shoulders measured in a horse) is very rarely attained, and is not exceeded by one animal in five hundred. Five years ago he had inserted a request for information on this subject in all the chief newspapers of India. Accounts of 11 ft. and 12 ft. elephants poured in, but none stood the test of inquiry. To make it worth anyone's while to establish such dimensions, he offered to give an order upon any gunmaker for the best double-barrelled rifle and all accessories to any gentleman who could produce evidence of an elephant even 11 ft. high. This was never done, and out of many thousands he had only found one elephant above 10 ft. This animal, belonging to the Maharajah of Nakim-Sirmoor in the Punjab, measures 10 ft. 7½ in. in vertical height at the withers, and he made a journey of one hundred miles in a palanquin to measure him with his own hands.

In connection with this part of his subject, Mr. Sanderson remarked that twice round an elephant's forefoot is his height, within an inch or two; more frequently it is exactly so. Out of many hundreds of elephants which he had measured, he had only once found the variation to be as much as five inches. In June, 1878, he measured the since famous African elephant Jumbo, which was then 10 ft. 5 in. at the withers. According to Sir Samuel Baker, who had seen large numbers of both Asiatic and African elephants in their native wilds, the Africans, male and female, average about one foot higher than the Asiatic.

Regarding the use and power of the elephant's trunk, Mr. Sanderson thought that much misapprehension also prevailed, this organ being chiefly used to procure food and to warn it of danger by the senses of smell and touch. It is a delicate and sensitive organ, never used for rough work, and in any dangerous situation the elephant at once guards it by curling it up. When engaged in such work as dragging timber, the rope is invariably taken between the teeth; they never attempt to pull a heavy weight with the trunk. An elephant is powerful enough to extricate a cannon from a difficult situation; but does so by pushing with the head or feet, or in harness, never by lifting or drawing with the trunk.

The age to which an elephant lives is, as must ever be the case with denizens of the forest, uncertain. The general native opinion is that they attain one hundred and twenty years in exceptional cases (they have been known to attain that age in captivity), but more usually to eighty years. Mr. Sanderson thought it by no means improbable that in a state of nature they might live to one hundred and fifty, or even two hundred years.

A remarkable fact in connection with wild elephants is the extreme rarity of any remains of dead ones being found in the jungles. In his own wanderings for several years through elephant jungles, he had only seen the remains of one female elephant, that died in giving birth to a young one, and of one other drowned in a mountain torrent.

If elephants live for two hundred years the annual deaths from natural causes would only amount to five per thousand. This figure would no doubt be exceeded in reality, as elephants are liable to be killed by each other. Though the number that die annually is thus probably much less than might be supposed, the mystery of what becomes of the remains of those that do die is still entirely unexplained.

A herd of elephants usually consists of from thirty to fifty individuals; but much larger numbers, even upwards of one hundred, are by no means uncommon. The herd is always led by a female, never by a male, and the necessity for this is evident, as the females must accommodate the length and time of their marches, and the localities in which they rest and feed, to the requirements of their young. As a rule, only one young one is produced at a birth; but Mr. Sanderson had known three cases

of elephants having two. Though a few are born at other seasons, the largest number make their appearance in September, October, and November. The elephant is full grown, but not fully matured, at twenty-five years of age. It does not attain full strength and vigour until about thirty-five years old.

Only the male Indian elephant has tusks; the female has short tushes or downward prongs in the upper jaw, seldom more than 4 in. in length. Notwithstanding the opinion of Jerdon and other authorities, Mr. Sanderson is confident that elephants never shed their tusks.* The skull of foetal elephants disclose milk tusks, but these never make their appearance; they are absorbed, and the tusk that cuts the gum is the permanent one. Nor are tusks lost by accident ever renewed. The finest pair of tusks he ever saw came from the Garo Hills. They measured 8 ft. 9 in. in length, and weighed 168lb. Sir Victor Brooke had shot an elephant in Mysore whose longest tusk measured 8 ft., and weighed 90 lbs.

Mr. Sanderson considered it as satisfactorily settled that there is no such creature as a really white elephant, the so-called albinos of the Kings of Burmah and Siam being merely elephants of a dirty cream colour, and, in some cases, merely elephants with an unusual amount of the flesh-coloured blotchings on the face, ears, and neck common, in some degree, to all elephants. He would not advert to Mr. Barnum's so-called "white elephant" further than to say that he regarded it as the commonest of common elephants, not possessing a single peculiarity (compared with the everyday elephants of India) to justify the statements regarding his colour and special character which preceded, and even followed, his arrival in England.

Mr. Sanderson then proceeded to explain the various native modes of capturing and training elephants, and gave a graphic description (assisted by diagrams) of the method of capture employed by himself for the Indian Government, namely, by

* This statement is at variance with the opinion expressed by Mr. Corse, who, occupying in Tipperah a similar position to Mr. Sanderson, published so long ago as 1799, a valuable memoir on the Asiatic Elephant, in the 'Philosophical Transactions' for that year, founded on personal observations. In this memoir it is stated that although a great portion of the root of the milk tusk is absorbed, the remainder is shed as a dark-coloured stump. The process of growth is described and figured.—Ed.

surrounding a herd (wherever found in the forest) by a large circle of men (370 is the usual number), and building a stockade, into which the herd are driven. This is known as the Government Kheddah plan, and is the most certain and economical method of taking wild elephants. By this means, as many as 118 have been secured at one drive.

When a sufficient number have been taken, the hunters are dismissed, and all elephants under 7 ft. in height are sold to merchants, who follow the Kheddah parties for the purpose of purchasing such animals. Those above 7 ft. are retained for the Government service, except some males and old females, which are also disposed of. Not more than 30 per cent. of the elephants captured are young and strong females thoroughly suitable for Government service. Those selected are divided into gangs of twenties, with a proportion of tame ones in charge. These escort the wild ones, bring their fodder, and lead them to water daily. The march from the jungle commences about the end of February, and the elephants reach the Government depôt at Dacca in May. They are then put into training, and by November are quite steady, and are drafted for military service.

During the past five years the annual average number of elephants captured during the short working season from December to February has been 154. The greatest number in any single year was 252 in seven weeks in 1882, and 199 in a similar period in 1883. Between 1878 and 1883 no less than 1866 wild elephants had been captured by the Dacca hunting establishment in a tract of country about fifty miles long by twenty miles broad in the Garo Hills in Assam, whilst fully as many more were met with *en route*. Mr. Sanderson concluded by stating that, notwithstanding these hunting operations, he considered the elephant as in no danger of becoming extinct in India, for, although small portions of its haunts had been cleared for tea and coffee cultivation, he thought the present forest area of the country would practically never be reduced, for reasons connected with the timber supply and climate; and, so long as its haunts remain, the elephant would flourish under due regulations for its protection.

NOTES ON THE VERTEBRATE FAUNA OF YORKSHIRE.

BY W. EAGLE CLARKE, F.L.S., AND W. DENISON ROEBUCK.

It is our intention to prepare from time to time—annually if possible—a report upon the vertebrate fauna of Yorkshire, in which we propose to embody not only notices of the rarer and more interesting occurrences in the county during the period covered by the scope of the report, but also such records of older date as may have escaped our attention during the compilation of our 'Handbook of the Vertebrate Fauna of Yorkshire,' together with such emendations and corrections of the statements contained therein as may seem to be called for.

The present report covers the period of time which has elapsed since the publication of our Handbook in the autumn of 1881 down to the end of 1883, and includes notices concerning eighty-seven species, of which the following nine appear to be additions to the Yorkshire list:—*Rhinolophus hipposideros*, *Emberiza rustica*, *Torpedo hebetans*, *Raja maculata*, *Auxis rochei*, *Trachypterus arcticus*, *Regalecus grillii*, *Engraulis encrasicolus*, and *Orthogoriscus truncatus*.

In addition to these there are various occurrences to record which are of special interest, such as those of *Vespertilio Nattereri*, *V. mystacinus*, and *Delphinus tursio* among the Mammalia; of *Turdus varius*, *Cyanecula* sp.?, *Cypselus melba*, *Botaurus lentiginosus*, *Ardea garzetta*, and the breeding in the county of *Querquedula circia* and *Spatula clypeata* among the Birds; and the occurrence of *Brama Raii*, *Mugil septentrionalis*, *Regalecus Banksii*, *Ctenolabrus rupestris*, *Nerophis æquoreus*, and *Atherina presbyter* among the Fishes.

The numerical summary of species now stands as follows, the British forms being also given for comparison:—

	Yorkshire.	Britain.
MAMMALIA.—Terrestrial	32	45
„ Marine	13	26
BIRDS	307	380
REPTILES.—Terrestrial	4	7
„ Marine	2	2
AMPHIBIA	6	7
FISHES.—Freshwater	32	53
„ Marine	123	196
	<hr/> 519	<hr/> 716

A few preliminary remarks on the chief features of the following report will not be without interest.

The MAMMALIA of Yorkshire were for the most part so well known at the time of publication of the Handbook that but little is required by way of addition or correction, except so far as regards the two groups—the Bats and the Cetaceans—which appear to be always the most imperfectly-studied groups of mammals in any district. With respect to the Bats, the result of Roebuck's investigations has been that, with the assistance of correspondents, the geographical range of some of the forms in Yorkshire has been studied to some purpose. One species is added to the list, and two others—hitherto only recorded for the county on the strength of isolated occurrences—have been fully confirmed as inhabiting it, one of the latter indeed proving to be a common and widely-distributed form. There is yet good work to be done in this group, for Daubenton's Bat—which will probably be found sooner or later—has not yet been detected. Yorkshire appears still to remain the northern limit of the range of the Noctule, for Mr. R. Morton Middleton informs us that its reported occurrence in South Durham was not confirmed.

The study of the Cetaceans is much more difficult, from their habitat and large size; and our only hope is that a competent naturalist may be at hand in the event of the capture of animals of this order.

BIRDS.—Numerically the Yorkshire avifauna remains at 307, the addition of the Rustic Bunting being counterbalanced by the subtraction of the Barbary Partridge. Should, however, specific rank be accorded to Pallas's Great Grey Shrike, as is done by Mr. Seebohm, this form would have to rank as an addition.

Here it will be advisable to call the pointed attention of our readers to the two paragraphs at the head of p. xxxvii. of the Introduction to our Handbook, which appear to have been overlooked by some of our critics, who might there have learned that we never allowed or recognised the claims of such dubious records as those of Richard's Pipit, the Purple Martin, the Great Black Woodpecker, the Hairy Woodpecker, the Little Owl, the Acadian Owl, the Harlequin Duck, the Passenger Pigeon, the Virginian Colin, the Sooty Tern, and the Laughing Gull. None of these are included in our numerical summaries, although in the body of our work we felt it quite within our duty to give the

evidence of their occurrence for what our readers might consider it worth.

As to REPTILES and AMPHIBIANS, there is nothing to remark, except that it is very desirable that naturalists should keep a look-out for further occurrences of the Natterjack Toad in the county. As to the so-called Sand Lizard, we have not yet been satisfied that the animal occurs so far north, the Northumbrian occurrence hinted at on p. xli. being a myth.

As to the FISHES,—the least-investigated class in our fauna,—we are pleased to be able not only to add seven species to the list, but to give a variety of further particulars and additional occurrences of interesting forms; and it may be as well to remark that to the severe storms which prevailed early in April, 1882, we owe several records of pelagic and abyssal forms, such as the Torpedo and the Deal-fish, and other rare species. No doubt, had naturalists been more numerous in our sea-board towns and villages, others would have been detected.

The numbers which are prefixed to the names correspond to those used in the Handbook.

MAMMALIA.

1. *Rhinolophus hipposideros* (Bechst.); Lesser Horse-shoe Bat. — This species—an important addition to the Yorkshire fauna—is not uncommon at Eavestone, near Ripon, where it is taken by Messrs. James Ingleby and William Storey, from both of whom Roebuck has received specimens in the flesh, and one or two alive (Zool. 1882, p. 186; Nat. 1882, p. 166).

12. *Vespertilio Nattereri*, Kuhl.; Reddish-grey Bat. — Two specimens were sent in the flesh to Roebuck by Mr. W. Storey, of Pateley Bridge, who captured one of them on the 24th of May, 1883, in Harefield Wood, near that place, and the other in the same habitat a few days later.

15. *Vespertilio mystacinus*, Leisl.; Whiskered Bat. — This species, which our work was the means of introducing to the Yorkshire fauna, may now be considered as a widely-distributed and fairly numerous form in the county. Roebuck has had specimens from Harrogate (Grange), Eavestone (Ingleby), Pateley Bridge (Storey), Ben Rhydding (Smethurst), &c.

23. *Martes sylvestris*, Nils.; Marten.—Specimens are recorded

as having been killed in Raydale, and in Kexby Woods, near York (Field, Oct. 1, 1881, p. 504).

28. *Meles taxus* (Schreb.); Badger. — Stragglers continue to be reported from time to time, as at Yarm, Sleningford, &c.

{42. *Hyperoodon rostratum* (Chem.); Common Beaked Whale.

{43. *H. latifrons*, Gray; Broad-fronted Beaked Whale.—Mr. Southwell informs us that *H. latifrons* has been proved to be the male of *H. rostratum*, thus diminishing the Yorkshire list by one species.

50. *Globicephalus melas* (Trail); Pilot Whale.—One was captured off Flamborough in February, 1865, and recorded as the "Ca'ing Whale, *Globicephalus deductor*" (J. Freeland Young, Field, Feb. 25, 1865).

53. *Delphinus tursio*, Fab.; Bottle-nosed Dolphin. — One stranded near Goole, Oct. 4, 1881, the identification of which was confirmed by Mr. Thomas Southwell (Naturalist, 1881, p. 66).

BIRDS.

5. *Turdus varius*, Pall.; White's Thrush.—Two additional occurrences. Rimswell, near Withernsea, one shot during the first week in November, 1881, and now in the collection of Mr. R. T. Burnham, of Rimswell, where Clarke has seen it. Waplington Manor, near Pocklington, one shot in early January, 1882 (Backhouse, Zool. 1882, p. 74; Inchbald, Field, 1882, p. 201).

8. *Turdus torquatus*, L.; Ring Ouzel.—The solitary instance of this species nesting near Beverley must now be considered doubtful.

11. *Cinclus melanogaster*, C. L. Brehm.; Black-breasted Dipper. Mr. Seebohm having expressed a doubt as to the occurrence of this species or race in Britain, Clarke forwarded him the Welwick specimen for examination, with the result that it was considered an undoubted example of this form.

17. *Ruticilla titys* (Scop.); Blackstart.—Mr. Bailey's note that he had observed this species at Flamborough in October and November having been doubted in high quarters, it is interesting to know that Clarke shot one at Spurn in the last week of October, 1882, and saw another there about the same date in 1883. It is probably a regular autumn visitant.

18 or 19. *Cyanecula* ? species; Bluethroat.—Spurn Head, one shot in Clarke's presence on the 11th of September, 1882, and

another seen the same day. The specimen procured was an immature bird, in which state of plumage the two species, *C. leucocyana* and *C. suecica*, are indistinguishable.

21. *Daulias luscini* (L.); Nightingale. — The northern range of this bird has been extended as far north as Scarborough, where it undoubtedly bred in 1882 (W. Robinson). At Staveley, near Boroughbridge, two pairs nested in 1881 (Knubley), and a pair nested near Harrogate in 1883 (Inchbald).

37. *Acrocephalus streperus* (Vieill.); Reed Warbler. Mr. Seebohm in his 'British Birds' remarks that "it seems very doubtful whether the Reed Warbler breeds in Great Britain north of the Humber." This statement is of course quite erroneous, for the species is known to breed commonly in various localities which are not only north of the Humber, but some of them actually in the northern half of the county—as, for instance, Staveley, near Boroughbridge, and Knaresborough, in both of which localities it nests annually. It is also a regular nesting species near Leeds; and at Hornsea Mere, in the East Riding, it breeds in great abundance. This is not the only instance in which we have to regret the vague and sketchy manner in which such an important subject as the distribution of birds in Great Britain is treated in so valuable a work.

71 a. *Lanius major*, Pallas; Pallas's Great Grey Shrike.— This form is allowed specific rank by Mr. Seebohm in his work on British Birds. From the number of Yorkshire specimens that have come under Clarke's notice it is in all probability not only an annual winter visitant, but perhaps of much more frequent occurrence than is suspected.

93. *Linota linaria* (L.); Mealy Redpoll.—The year 1881 may be added to the list of seasons in which this species occurred in large flocks in the county.

96. *Linota flavirostris* (L.); Twite. — Mr. Allis's statement that this bird had bred on Thorne Waste is paralleled by the observations of the Rev. H. H. Slater (Nat. 1882, p. 179), who found it nesting on Pilmoor, near Thirsk, a similar low-lying locality.

107. *Emberiza cirrus*, L.; Cirl Bunting. — Additional occurrence. Fen Bog, near Whitby, a female shot on the 28th of February, 1882, now in the Whitby Museum. Two others were seen at the same time and place (Stephenson).

108. *Emberiza hortulana*, L.; Ortolan Bunting. — The specimen captured off the Yorkshire coast, which served for Bewick's figure, is now, according to Seebohm's 'British Birds' (vol. ii. p. 153), in the Newcastle Museum.

109. *Emberiza rustica*, Pall.; Rustic Bunting. — An addition to the avifauna; an accidental visitant from North-Eastern Europe and Northern Asia. Easington, a female (?) shot September 17th, 1881 (Clarke, Zool. 1881, p. 465; Nat. 1881, p. 57; Ibis, 1882, p. 181).

133. *Cypselus melba* (L.); Alpine Swift. — Additional occurrence. Huddersfield, a female brought in the flesh to Mr. S. L. Mosley on the 2nd of June, 1881, which had been found in an exhausted condition a day or two before (Mosley, MS.).

139. *Picus minor*, L.; Lesser Spotted Woodpecker. — Mr. Thomas Carter, of Masham, informs us that this species occurs about Aysgarth, in Wensleydale, and around Masham.

141. *Jynx torquilla*, L.; Wryneck. — Is an annual summer visitant to Walton Park, near Wakefield (H. B. Hewetson).

143. *Coracias garrulus*, L.; Roller. — One was seen by Mr. H. T. Archer on the banks of the Wharfe, near Ilkley, about the end of July, 1881 (Archer, Field, Aug. 6, 1881, p. 193; and MS.)

152. *Asio accipitrinus* (Pall.); Short-eared Owl. — A specimen shot at Spurn by Clarke in October, 1879, is in the arctic form of plumage described by Mr. Seebohm (British Birds, i. 172).

Falco sparverius, L.; American Kestrel. — In 'The Zoologist' for 1883, p. 126, Mr. James Backhouse, jun., records an occurrence of this species near Helmsley in May, 1882. We have very carefully investigated the evidence, and regret that we are unable to accept the bird as a member of the Yorkshire fauna, as certain features in the case are, in our opinion, fatal to its claim to be considered British.

186. *Pandion haliaetus* (L.); Osprey. — During the autumns of 1882 and 1883 this species appears to have been much more frequently observed than it has of late years, when indeed it was comparatively almost unknown.

187. *Phalacrocorax carbo* (L.); Cormorant. — This bird ceased to breed at Huntcliffe (not Arncliffe, as stated in the Handbook) near Saltburn some years ago; but now breeds in the cliffs near and at Kettleness (T. H. Nelson, MS.).

190. *Ardea cinerea*, L.; Heron. — Mr. H. B. Hewetson informs

us that there is a heronry at Nostell Priory, the seat of Mr. Rowland Winn; and Mr. Backhouse, jun., of one numbering about fifty nests at Moreby Park, near York.

193. *Ardea garzetta*, L.; Little Egret.—Additional occurrence. Aike [incorrectly spelt Ake] Carr, near Beverley, one obtained about 1840 (Ruskin, 'The Eagle's Nest,' p. 170).

196. *Ardetta minuta* (L.); Little Bittern. — Additional occurrence. Goole, a young male obtained September 23rd, 1881, now in the possession of W. E. Clarke (Bunker, Nat. 1881, p. 66).

199. *Botaurus lentiginosus* (Mont.); American Bittern. — Additional occurrence. Harsley Castle, Welbury, near Northallerton, one shot by the Hon. W. Dawnay, October 27th, 1882, which was examined by Mr. John Harrison.

206. *Anser segetum* (Gm.); Bean Goose. — Mr. Boyes is of opinion that the immense flocks noted as formerly visiting the Wolds were not of this species, but were composed of Pink-footed Geese. Our authority for the statement was Mr. Arthur Strickland, as quoted by Allis in his 'Report on Yorkshire Birds,' read before the British Association in 1844.

219. *Anas boschas*, L.; Mallard. — Mr. Boyes informs us that the decoy at Meaux, in Holderness, the site of which is still to be seen, was about a quarter or half an acre in extent, with four pipes.

220. *Chaulelasmus streperus*, L.; Gadwall. — A pair, male and female, were shot on the River Hull, near Beverley, in the middle of May, 1882 (Dobrée, Nat. 1882, vii. 185).

221. *Spatula clypeata* (L.); Shoveller. — This species bred in 1880 on Thorne Waste, a nest with four eggs being taken by the late Mr. Wm. Talbot, of Wakefield, and others. About the year 1866 it bred near Masham; and in 1882 a pair again appeared at the same place, but, being disturbed, did not remain (T. Carter).

222. *Querquedula crecca* (L.); Teal. — Breeds not uncommonly on Thorne Waste (Clarke); and in the season of 1883 a pair bred on the moors near Masham (T. Carter).

223. *Querquedula circia* (L.); Garganey. — Beverley, a nest with nine eggs found by Mr. J. C. Swailes, who almost trod on the sitting female on the 21st of May, 1882 (Boyes, MS.); the first instance of its being known to breed in the county.

224. *Dafila acuta* (L.); Pintail. — Two pairs remained on a small pond on a warren at Kilnsea, in Holderness, until late in April, 1881 (P. W. Lawton).

229. *Fuligula cristata* (Leach); Tufted Duck. — Seen at Hornsea Mere on the 12th of June, 1883, by Mr. J. C. Swailes. Sir Wm. Milner (Zool. 1854, p. 4441) also observed it there in summer, and it doubtless breeds there.

246. *Columba livia*, Bonnat.; Rock Dove. — The statement in the 'Yorkshire Vertebrata' that this species is *reported* to breed in inland localities has been criticised by some correspondents; but Clarke's request for specimens has never been complied with.

247. *Columba ænas*, L.; Stock Dove. — Regarding the spread of this species, Clarke contributed some Yorkshire notes to Mr. Harvie Brown's valuable paper, read before the Royal Physical Society of Edinburgh on the 21st of February, 1883, "On the Stock Dove (*Columba ænas*), with Remarks upon its Extension of Range in Great Britain." From this we quote Clarke's concluding remarks, which appear as a footnote:—"Since the above was penned I have instituted further inquiries into the range and spread of the Stock Dove in Yorkshire, with the chief result that I am informed, on the reliable authority of Mr. Boyes, that warreners now alive remember this bird being numerous on the Wolds *sixty years ago*, when it was their perquisite. Thus it is a most interesting fact that at a period when the Stock Dove was almost, if not quite, unknown elsewhere in the county, it was common on the vast Wolds of the East Riding. I am inclined to think that Yorkshire and other neighbouring counties have been peopled with Stock Doves from this source; for with the gradual enclosure and cultivation of these great warrens we find a simultaneous and equally gradual spread of this species has taken place."

252. *Caccabis rufa* (L.); Red-legged Partridge. — Mr. C. Fullerton Smith ('Field,' Feb. 10, 1883, p. 184) gives notes on the introduction of this species into Yorkshire. At Hornby Castle they were turned down in 1846-7, but afterwards shot off. The same thing took place at Swinton, near Masham. At Ingleby, in the North Riding, some twenty years ago, about fifty brace were turned down by Lord de L'Isle, and now, on the neighbouring manors of Ormsby and Deighton, a few brace are shot every season. This information is interesting, and supplies material upon the introduction of this species into the county which we were unable to obtain in 1881.

253. *Caccabis petrosa* (Gm.); Barbary Partridge. — Mr. Boyes

informs us that the Beverley specimen was an escape; he had an opportunity of examining the bird, and found it was *pinioned*. This species must therefore be eliminated from the county list.

264. *Porzana bailloni* (Vieill.); Baillon's Crake.—The Goole specimen proved on examination to be an immature example of *C. maruetta*, the Spotted Crake (Clarke). Additional occurrence: Holmpton, in Holderness, one shot in 1880, now in the collection of the Rev. H. H. Slater (Slater, MS.).

272. *Otis tarda*, L.; Great Bustard.—Additional information has been obtained on the former occurrence of this fine bird, which it is proposed to reserve for a future article on this species in Yorkshire. We may remark that, in his continuation of Yarrell's 'British Birds,' Mr. Saunders has reproduced the old mis-statement as to Hawold being in Lincolnshire, whereas, as we have already indicated, it is in Yorkshire.

275. *Ædicnemus crepitans*, Gm.; Stone Curlew.—A pair of this species, which is now becoming very rare on the southern Wolds, bred near Market Weighton in 1881.

299. *Tringa minuta*, Leisler; Little Stint.—

302. *Tringa subarquata* (Güld.); Curlew Sandpiper.—Both species were particularly numerous on the coast in late August and early September, 1881; and in the early autumn of 1880 the Little Stint was again numerous (Clarke).

310. *Totanus macularius* (L.); Spotted Sandpiper. — The specimen recorded from the Tees proved to be a Green Sandpiper (J. H. Gurney, jun., 'Rambles of a Naturalist,' p. 255).

311. *Totanus glareola* (L.); Wood Sandpiper. — Additional occurrences: Coatham Marsh, adult shot, August 6th, 1881 (T. H. Nelson, Zool. 1882, p. 91). Beverley, one shot in the spring of 1882, in the collection of Mr. F. Boyes (Boyes, MS.). Bridlington Quay, one shot, mid-August, 1883 (Clarke). Easington, Holderness, one shot, early autumn, 1883 (Clarke).

314. *Totanus calidris* (L.); Redshank. — Bred on Skipwith Riccall Common in 1882, and at Masham in 1883.

316. *Totanus fuscus* (L.); Spotted Redshank. — Additional occurrence: Teesmouth, an adult shot on September 15th, 1881 (Nelson, Zool. 1882, p. 93).

323. *Numenius arquata* (L.); Curlew.—Breeds commonly on Thorne Waste, a vast tract of heather-land on the Lincolnshire border of the county, and very little above sea-level.

326. *Sterna dougalli*, Mont.; Roseate Tern.—Mr. T. H. Nelson informs us that the five recorded for Tees Bay by "Argus" were Common Terns, and not this species.

332. *Sterna fuliginosa*, Gm.; Sooty Tern.—As suspected (Handbook, p. xxxvii), this specimen has proved to be a Black Tern.

342. *Larus ridibundus*, L.; Brown-headed Gull.—A few pairs bred in 1881 and 1882 in a marshy field by the River Aire, just outside the Leeds borough boundary, and in 1883 they bred in some numbers on Strensall Common, but their eggs, about forty in number, were taken. The discussion in various numbers of 'The Field' for February and March, 1884, has added nothing to the information concerning Yorkshire which was in our possession at the time of framing our original account.

352. *Larus leucopterus*, Faber; Iceland Gull.—Additional occurrences: Spurn, a mature female and a bird of the year shot December, 1882, now in Clarke's possession.

359. *Procellaria leucorrhoa*, Vieill.; Leach's Petrel.—Additional occurrences: Riplingham, near Beverley, one in December, 1881 (Dobrée, Nat. 1882, p. 100). One obtained near Whitby, in the possession of Mr. C. Bagnall (Stephenson).

362. *Puffinus griseus* (Gm.); Sooty Shearwater.—At the time of publishing the 'Handbook' we were unable to discriminate between the recorded occurrences of *P. griseus* and *P. major*. We can now record the following occurrences of this species: one shot at Whitby in September, 1870, now in the Museum (Stephenson). One shot in Bridlington Bay, 1872, by Mr. Elton, is referred to this species (Macpherson, Zool. 1883, p. 121). Clarke examined a fine pair in September last, which had been shot at Flamborough. One shot at Redcar, Sept. 17, 1883 (T. H. Nelson, Zool. 1884, p. 147), but not, as the recorder supposes, an addition to the fauna of the county.

FISHES.

5. *Lamna cornubica* (Gm.); Porbeagle.—In August, 1883, four were captured alive in Bridlington Bay, one of which, examined by Clarke, was eight feet long.

6. *Alopias vulpes* (Gm.); Fox Shark, Thresher.—One captured on September 19th, 1883, at Hornsea, eleven feet in length (Dobrée, Naturalist, 1883, ix. 69).

13. *Læmargus borealis* (Scoresby); Greenland Shark.—Whitby, one caught by Thomas Langley, and brought into the port, Feb. 7th, 1882 (T. Stephenson, MS.).

16. *Torpedo hebetans*, Lowe; Cramp-ray, Torpedo.—Additional to the Yorkshire fauna. Easington, one captured on the 14th of April, 1882 (Clarke, Zool. 1882, p. 193). Bridlington, one washed ashore and captured alive in the spring of 1883 (Thomas Boynton MS.).

18. *Raja maculata*, L.; Homelyn Ray.—Additional to the fauna. Mr. Winson, the coxswain of the Spurn lifeboat, who is a practical fisherman and a careful observer, on being shown the plate of this species in Couch's 'British Fishes,' recognised it as one which he has caught commonly at "California," a fishing-ground ten miles off the coast between Flamborough and Withernsea.

20. *Raja circularis*, Couch; Sandy Ray.—The Cuckoo Ray (*Raja miraletus*) of Couch, which is a variety of this species, has been observed by Mr. Winson as taken in "California."

32. *Labrax lupus* (Lacép.); Basse.—A specimen of this fish, weighing eleven pounds, which was caught at Whitby on the 22nd November, 1883, is noteworthy on account of the date. It contained a quantity of spawn (T. Stephenson, MS.).

58. *Zeus faber*, L.; Doree, John Doree.—At Bridlington this appears to be a not uncommon fish, occurring regularly every summer.

61. *Brama Raii*, Bl.; Ray's Sea-bream.—On Whitby Sands a very fine specimen was found alive on November 2nd, 1882. It measured 24 in. in length, 19½ in. in girth, and weighed six pounds. It is now in the Whitby Museum (Thomas Stephenson, MS.).

62. *Lampris luna* (Gm.); Opah, King-fish. — Spurn; one occurred a few years ago (Clarke, MS.).

70. *Auxis Rochei* (Risso); Plain Bonito.—An addition to the fauna. Off Whitby, two occurrences in 1882. The first specimen was captured on September 9th; it measured 2 ft. 4 in. in length, and is now in the Museum. The second, which was 2 ft. in length and 6¾ lbs. in weight, was captured on the 18th of the same month (Thomas Stephenson, MS.).

85. *Agonus cataphractus* (L.); Pogge, Armed Bullhead.—When we wrote in the Handbook of these being taken in lobster-pots

at Spurn we were under a misapprehension; they are taken within the Humber estuary by means of the seine-net, which is used for the purpose of obtaining bait for the lobster-pots.

106. *Atherina presbyter*, Cuv.; Atherine, or Sand-smelt.—Additional evidence of the occurrence of this fish is to be found in a note in 'Science Gossip' for 1866, p. 254, wherein Commander Knocker, R.N., states that he had obtained many specimens, especially out of a dam erected for the new pier-works, at Bridlington.

111. *Mugil septentrionalis*, Günth.; Lesser Grey Mullet.—We are able to confirm, on unexceptionable authority, the occurrence of this fish. Specimens taken by Clarke at Spurn Point, just within the estuary of the Humber, on May 31st, 1882, submitted to Dr. Günther, were pronounced by him to be unquestionably of this species.

115. *Gasterosteus pungitius*, L.; Ten-spined Stickleback.—Occurs at Hobmoor and Bootham Stray, near York (E. J. Gibbins, MS.).

121. *Trachypterus arcticus* (Brünn.); Deal-fish, Vaagmaer.—An addition to the list. Flamborough, one was captured alive in perfect condition on the rocks near the Head, on the 17th April, 1882 (Boynton, Field, April 22nd, 1882, p. 535; Naturalist, 1882, vii. 185).

122. *Regalecus banksii* (C. & V.); Banks' Oar-fish.—Bridlington Quay, one washed ashore on the 7th of April, 1882. It measured 19 ft. in length, and 21 in. in depth, and thus appears to be the largest specimen on record (Boynton MS.; Dobrée, Naturalist, 1882, vii. 185).

125. *Regalecus grillii* (Linds.); Sild-Kung.—The specimen, which in our Handbook is recorded under *R. banksii* as taken at Staithes in January, 1880, is considered by Dr. Day, in his 'Fishes of Great Britain and Ireland,' as being probably—from the dimensions given—referable to this form, which, however, he regards as merely a variety of *R. banksii*.

127. *Ctenolabrus rupestris* (L.); Jago's Goldsinny.—Whitby, March 8th, 1883, a large number, variously estimated at from 40 to 100 in number, were washed ashore. One brought alive to Mr. Thomas Stephenson was compared by him with Dr. Day's plate, and the description of it, which he communicated to us, affords no reason to doubt the accuracy of his diagnosis.

184. *Leuciscus erythrophthalmus* (L.); Rudd.—Mr. Clifton R. Garwood, of Acomb, near York (writing in 'The Field,' June 9th, 1883, p. 765) noted having seen the Azurine or Blue Roach (a variety of the Rudd) in the River Ouse, amongst a shoal of Roach, Bleak, and Dace.

201. *Salmo fario*, L.; "var. *g*, Swaledale Trout" of Dr. Day.—Under this name Dr. Day (Fishes of Great Britain and Ireland, ii. 100) describes and figures a variety which is comparatively rather broad, and in colour the most beautifully tinted form he has seen. The specimens were sent to him by Mr. George Brook, jun., by whom they were taken in the Oxnop Beck, Upper Swaledale.

223. *Engraulis encrasicolus* (L.); Anchovy.—An addition to the list, previously overlooked by us. Bridlington, two specimens caught on the 17th October, 1866 (H. H. Knocker, Science Gossip, November, 1866, p. 254).

236. *Nerophis æquoreus* (L.); Æquoreal Pipe-fish.—Whitby, one washed up in March, 1883, which had forty-four rays in the dorsal fin, and measured $15\frac{1}{4}$ in. in length (Stephenson, MS.).

241. *Balistes capriscus*, Gm.; File-fish.—Dr. Day, at p. 269 of his work, cites, from The Zoologist for 1868, p. 1027, a record of the occurrence of this species at Flamborough. Of this record we were fully cognisant at the time of writing the Handbook, the result of our enquiries being that—as Mr. Bailey assured us—the specimen was an Opah or King-fish.

243. *Orthogoriscus mola* (L.); Short Sun-fish.—Bridlington, five in August, 1866, mostly of small size (H. H. Knocker, Science Gossip, 1866, p. 254). Bridlington, one which weighed nearly 250 lbs. was shot on the 16th of August, 1882 (Bridlington Quay Gazette, August 19th, 1882).

244. *Orthogoriscus truncatus* (Retz.); Oblong Sun-fish.—Additional to the fauna. Mr. Stephenson has sent us an extract from the 'Whitby Repository' for December, 1867, recording the capture of an "*Orthogoriscus oblongus*, Oblong Sunfish," at Whitby in the November of that year, which measured 5 ft. across the fins and 5 ft. from head to tail. It was sold to Mr. Grier for the Museum at Huddersfield.

In conclusion we have to acknowledge our indebtedness to numerous correspondents whose notes are acknowledged in the text, and it is our duty to record our special obligation to Mr.

Thomas Stephenson, of Whitby, for the number and value of the notes he has sent us from time to time; we have also to thank Mr. George Roberts for drawing our attention to a few published records which had escaped our attention, and Messrs. George Brook, jun., Thomas Carter, and E. J. Gibbins for their response to our note inviting co-operation.

ORNITHOLOGICAL NOTES FROM NORTH LINCOLNSHIRE
IN THE AUTUMN AND WINTER OF 1883.

BY JOHN CORDEAUX.

FROM an ornithological point the autumn and winter of 1883 has been the least eventful and interesting of any I have experienced during a residence of thirty years on the east coast. There has been an almost entire absence of such species as may be designated rare and occasional visitants, and even our more common and regular visitors, both land and shore birds, have been singularly scarce. To an unprecedentedly mild winter, without any prolonged frosts or snow storms, we may probably look for an explanation of this deficiency.

To the wildfowl shooters along the coast the season has also been a most unproductive one, the absence of Ducks, Plover, and Snipe affording them but little opportunity of exercising their vocation, the result being also all along apparent in the scanty show in the game shops, almost conclusively supplied from foreign sources.

On September 14th a Honey Buzzard was captured at 1 a.m. against the lantern of the Spurn lighthouse, and another was shot on the 17th near Kilnsea. There appears to have been a considerable immigration of the larger *Falconidæ*, with many other species, on September 21st; and the same rush of birds was observed at Heligoland.

On October 21st I shot a female Long-tailed Duck from a flooded meadow near Kilnsea. I got a long shot at the bird as it drove in overhead, just at sundown, and evidently wounded it, as it did not rise again after pitching. I had a long cold walk to recover my spoil, the duck diving with extraordinary rapidity; notwithstanding a wounded wing its course in the clear water could be very clearly seen, and I was reluctant to fire again for

fear of injuring the specimen. The gizzard was quite crammed with small red worms and many minute stones. This, excepting a Black Redstart, seen by Mr. Wm. Eagle Clarke, was the only rarity we obtained at Spurn in the autumn. On the 24th I found the remains of a young Cuckoo, killed some time previously, against the telegram wire which extends for several miles along the sand-hills to the Point, against which fatal thread many a rare immigrant has dashed in the night migration.

An interesting capture for Lincolnshire was that of the Roller, shot on October 27th, at Muckton, near Louth. I saw this bird shortly after at Mr. Kew's, the birdstuffer's, and conjecture from the generally dingy appearance of the plumage that it was a bird of the year.

The first flight of Woodcocks arrived at Spurn on the night of October 21st; the great flight on the night of the 28th. Both these flights correlate with their passage across Heligoland. On the east coast sportsmen hold that it is a south-east wind which brings *large grey* or light coloured cocks, a north wind bringing *small red-coloured* birds. All our Woodcock shooters on the east coast—I mean those who have any experience in this matter—recognise the difference between the two, the former doubtless coming from more southern localities than the little red Scandinavian bird.

The past autumn was singularly deficient in rare and interesting visitants. Mr. Philip Lawton, of Easington, had three Wood Sandpipers brought to him about the middle of September, and Mr. Clarke received one, shot on the south-sand Bridlington, about the middle of August. These were immature birds.

During the first week in December great flights of Snow Buntings arrived in the east coast marshes with north winds and snow-squalls, and for some days the accumulated flocks quite crowded the stubbles. Hundreds and thousands rose on being disturbed, and with much twittering flitted heedlessly past the intruder, settling again immediately. I found it almost impossible to keep them on the wing. The proportion of old to young was about one in forty.

Pied Wagtails and Stonechats have remained with us all through the winter, and I have seldom visited my sheep folded on turnips without seeing either one or the other. The Stone-

chat almost invariably perched on the top of a net stake, looking not unlike a young Redbreast.

On March 1st Yellowhammers were migrating northward, and for some hours I noticed them swarming on the shrubs in the garden and neighbouring hedgerows.

REMARKS ON THE FUNDAMENTAL DISTRIBUTION OF COLOUR IN A LIVING ECHENEIS.

BY LEON VAILLANT.*

THE fishes of the genus *Echeneis*, the best known of which, *E. remora*, has long attracted the attention of naturalists, and even of unscientific persons, by the singular modification of its first dorsal fin transformed into a sucking disc upon the head, do not seem to have given rise to any observations regarding their coloration.

If we refer to descriptions in different treatises on ichthyology we find that the species are generally described as being of a sombre tint, more or less brown, uniform; some have paler longitudinal lines which may be regarded as being connected with a particular pattern, but not depending upon what may be termed the fundamental distribution of colour. These are facts which may be verified by an examination of specimens preserved in collections.

Guichenot, who seems to have observed one species in a fresh state on the coast of Algeria, says, "Its colour is of a deep bluish, shading towards black on the back."

Having had an opportunity this year, during the cruise of the 'Talisman' on the West Coast of Africa, of examining one of these fishes which was captured with a Shark of the genus *Carcharias* to which it was adhering, I was struck with the disposition of its colour, the more interesting on account of its connection with its peculiar habits.

Whilst with fishes the dorsal surface is always more brightly coloured than the ventral, which is white, with the *Echeneis*,

* Translated from the "Bulletin de la Société Philomathique de Paris," 1884, pp. 5, 6.

which forms the subject of this note, it was precisely the reverse, the belly and sides being of a bluish black, iridescent, whilst the back, especially between the cephalic disc and the dorsal fin, was silvery white.

Moreover, on examining the fish, one was at first sight tempted to assume just the contrary of what was the fact, mistaking the upper for the under surface and *vice versa*.

The illusion was all the greater when, on being placed in a bowl of sea-water, it at once attached itself to the bottom, thus presenting to the observer its dark ventral surface. Moreover the eyes are directed towards the latter surface, being flanked by the upper portion of the head; and the mouth, the upper part of which projects beyond the lower, reminds one that in a great many fishes, on the contrary, the upper jaw is the shorter of the two.

This disposition of colour, the reverse of which is usually the case, evidently results from the fact that the *Echeneis* being attached by its cephalic disc either to another fish or to some submerged object, its dorsal surface is in contact with this support, and consequently protected from the light which on the other hand strikes the ventral and lateral surfaces.

It is, in fact, comparable with the distribution of colour in the *Pleuronectidæ* which have the upper side variously coloured, while the under side is pale.

NOTES AND QUERIES.

Proposed Supplement to Thompson's 'Natural History of Ireland.'

—A want has long been felt of some compendium of Irish Natural History more recent than the well-known work of Thompson, now about thirty years old. This want has been strongly expressed by many modern writers on Irish Zoology, who complain that no work is now available which contains the additions which have accumulated since the time of Thompson. During late years the fauna of Great Britain has been laboriously investigated, while that of Ireland has been comparatively neglected. It is now our object to collect and publish as much new information as can be obtained, especially that relating to the Mammalia, Birds, and Fishes of Ireland; and Mr. A. G. More, Curator of the Natural History Museum, Kildare Street, Dublin, has consented to act as Editor. The students of Natural History throughout Ireland are invited to join in supplying to

Mr. More such notes as they can, both from their own personal observations, or from any other reliable sources. It is proposed to commence with the Birds, and to note, under the head of each species, whether it is numerous or rare, increasing or decreasing, local or generally distributed; whether it breeds in the country, or formerly did so; whether it is a regular summer or winter visitant, or straggler of rare occurrence. In the case of a rare bird, the date and all particulars of its capture are requested. The skin, however roughly preserved, should be retained as a means of identification, and the name of the collector or collection where the specimen is to be seen should be given; for, above all, it will be necessary that every species should be identified beyond a doubt. In drawing up a local list, no species should if possible be omitted, as the range in Ireland of some birds is not yet well ascertained, but contributors not prepared to enumerate every species may still supply useful information concerning some. The names of all those who contribute information will in every case be acknowledged. It is requested that all communications be addressed to A. G. More, Esq., F.L.S., Museum of Science and Art, Kildare Street, Dublin.—Signed, R. M. BARRINGTON (Fassaroe, Bray, Co. Wicklow), A. G. MORE, J. D. OGILBY (Altnachree, Strabane, Co. Tyrone), R. J. USSHER (Cappagh, Lismore, Co. Waterford), ROBERT WARREN (Moyview, Ballina, Co. Mayo).

The Ornithological Congress at Vienna.—This International Congress, to which we referred in our last number (p. 139), was duly inaugurated by the Crown Prince, Rudolph, who made an opening speech, in which he dwelt upon the great importance of those studies in Natural History which characterise the present century, an observation doubtless intended as a reply to the attack on modern science recently made in the Austrian Parliament by the clerical Deputy Greuter. The Congress was attended by ornithologists from Austria, Germany, Switzerland, France, Italy, Holland, Sweden, and Russia, and even from Siam and Japan; but, strange to say, there were no delegates from England. Considering the leading part taken by our countrymen in ornithological science, by whom, it may be said, all the best monographs of the day have been written, and the leading ornithological journal founded, it is a little remarkable that no steps were taken to ensure the attendance of some representative or representatives from this country. It seems to us that the occasion demanded it, and delegates from the British Museum, the Zoological Society of London, and the British Ornithologists' Union might easily have been nominated to represent these several institutions, and to take part in the deliberations of the Congress on matters of interest to ornithologists all the world over. We have yet to receive a report of the proceedings.

British Animals at the British Museum.—The arrangement of the British collection at the new Natural History Museum has been com-

menced, and a large number of time-honoured specimens are being either dismounted or removed from the galleries. Many of the most important specimens are from the old Montagu collection, and are therefore nearly 100 years old. Never having been properly preserved, and having been mounted with all the bones in them, these historical specimens have for some time been gradually decaying, and very few of them are now fit for exhibition. It is needless to add that, under the care of the officer in charge of the ornithological department at South Kensington, every reverence will be shown for these ancient and valuable relics, and an effort will now be made to replace them in the exhibition rooms by a more complete series of British Birds than the Museum has yet shown to the public. Especial pains is being taken to illustrate the various plumages of each species, the seasonal changes, &c. All this will, of course, be a work of time, and our object in mentioning the fact is to ask the assistance of naturalists all over England to help in the formation of the new zoological collection. It is only by the co-operation of his brother ornithologists that Mr. Bowdler Sharpe can hope to succeed in his aim, which is to render the collection of British Birds in the Natural History Museum the best in the land, and worthy of the nation to which it belongs.

MAMMALIA.

Polecat in Devonshire.—Under this heading you were good enough to insert (Zool. 1883, p. 25) a note which I sent you. Since then I have received information on the subject from several readers of 'The Zoologist' and others, and it may be worth while to put on record their evidence, as showing the gradual extinction of the Polecat in this county. Mr. Gatcombe very kindly allowed me to search through the lists of animals stuffed by the late Mr. Bolitho, a well-known birdstuffer of Plymouth, of which he had become possessed. I found ten instances in which Bolitho had received Polecats, or "Fitches," as he generally termed them, between 1843 and 1859, the last being on September 17th of the latter year. Mr. Gatcombe tells me he has seen one at a birdstuffer's since Bolitho's death, which occurred in 1883, and he has just informed me that one was caught in a trap set for rabbits near Plymouth at the end of last March. He thinks it a female, as it is rather small in size. It seems hardly likely that it was an escaped brown Ferret, though it is somewhat light in colour, but it is impossible to distinguish between the two animals. Mr. Daniel Radford, of Lydford Bridge, tells me that one was killed there about seven years ago, and when I was at that beautiful locality in July last, I saw one nailed up on the wall of the gamekeeper's dog-kennel, which had been killed in the previous April. Of course I secured the head, and it has been well macerated and made into a good skull. These recent occurrences satisfactorily prove that the Polecat is hardly yet extinct in the western portion

of Devon. Mr. R. P. Nicholls says he has not had one sent to him during the eighteen years he has been at Kingsbridge. Mr. Henry Balfour kindly wrote to inform me that a man who had been master gunner at Dartmouth Castle, had more than once seen Polecats in the neighbourhood west of the Dart Estuary—I suppose within the last few years. Mr. T. Jacobs, of Newton Abbot, says that the last specimen he received to mount was from the neighbourhood of Moreton, on the borders of Dartmoor, but he had not had any for the last ten years. Coming nearer Exeter, I find that the last date at which I saw one alive was on August 30th, 1852, near Topsham. J. Truscott says the last he knows of was killed on Lady Rolle's property near Woodbury, and I saw the skull of one nailed to a tree near the gamekeeper's cottage at Woodbury Castle, in the spring of 1882. The animal must have been dead a good many years, as the skull was quite clean and white. I offered a reward for a specimen, but as none has been sent me I suppose this animal is extinct in that part of the county. Mr. C. D. Heathcote, of Raleigh, near Bideford, tells me that one was killed at Northam, in that parish, about 1853, but he has not heard of any occurrence since then. It seems only too probable that in North and East, and perhaps in South Devon, the Polecat is now extinct, but that a very few still linger in the extreme western portion of the county.—W. S. M. D'URBAN (Albert Memorial Museum, Exeter).

Nest of the Harvest Mouse.—During the autumn of 1883, especially harvest time, several nests of the Harvest Mouse, *Mus messorius*, were taken by myself, mostly from barley-fields, being placed upon the laid barley. Almost all contained young ones, numbering from six to eight, and it was surprising to see how eight fair-sized mice could possibly live in a nest hardly as large as an orange. I took them the first time last year, and was surprised to find them in such numbers.—E. CHARLES MOOR (Great Bealings, Woodbridge, Suffolk).

BIRDS.

Migratory Birds on the Yorkshire Moors.—The Chiffchaff was first heard last year on April 2nd, and left us about Sept. 1st. The Wheatear was very abundant on the edges of the moors, and was reported to me on April 1st. At the same time the Stonechat, *Saxicola rubicola*, appeared on the lower parts of the moors, where the furze and brambles abound. These signs of awakening spring induced me to take a walk across the moors to "Bill's-o'-Jacks," so well known to all lovers of nature in this part of Yorkshire, and I was well repaid. On April 14th I set out on my stroll, and in a garden close to the moors I noticed the Common Whitethroat performing its peculiar undulating flight to and from a small currant tree in search of insects. The Blackcap is rather scarce hereabouts, and the only one I saw last summer flew out of a cottager's garden as I passed along

the road. During a severe storm, and whilst shooting Grouse on the Marsden Moors last August, I observed an Oystercatcher. I imitated its call until it came within shot, when I fired at and killed it. I have never before noticed an Oystercatcher so far inland. I saw a pair of Ring Ouzels on the 25th September last, feeding on mountain ash berries, on the skirts of Clues Moor, near Huddersfield. I suspect they breed in the neighbourhood occasionally, as they do on the Malvern Hills. I shot a hen bird near the same spot last April, and found that the crop was well filled with ivy-berries, and the ovary contained eggs in an early stage of development. Crossbills appeared about the 10th October. On the 20th of that month I observed several in some fir trees adjacent to Blackmoor Foot Reservoir, feeding on the fir-cones. Their appearance here is rarely noted. About the same time several Hawfinches were observed feeding on hawthorn berries in the orchard at the back of my house. The Brambling, or Mountain Finch (*Fringilla montifringilla*, Linn.), is one of the latest migratory visitors to the moors; I noticed them on November 20th in beech trees surrounding the beautifully situated residence of Mr. Joseph Crowther, Marsden; and on the same day I flushed a Water Rail, *Rallus aquaticus*, which I shot. On October 10th I flushed and shot at a Great Snipe on the Blackmoor Foot Moors. It has been observed several times in the neighbourhood.—ISAAC HARDING (Lenthwaite, near Huddersfield).

Great Grey Shrike in Suffolk.—On February 29th, while walking home from Woodbridge, about 4 p.m., I noticed a peculiar looking bird fly with something in its bill, and perch upon the tallest bough of an oak. Carefully walking up to the bird, which allowed me to get close to it, I saw it was a female Great Grey Shrike, *Lanius excubitor*, a rare bird in this locality, and was delighted to get such a good view of it. It took no notice of me, and, wishing to see it on the wing, I was actually compelled to throw stones at it.—E. C. MOOR (Great Bealings, Woodbridge, Suffolk).

Early nesting of the Common Heron.—Last year I paid a visit to a heronry on the 23rd March, and although it was bitterly cold just then, the winter had been very open and mild. Most of the nests contained young ones, but I succeeded in getting a clutch of four eggs, considerably incubated. This year I again visited the heronry, but a month earlier, *viz.*, on the 23rd February. Five nests were examined, with the following results:—one contained four eggs; another four fresh eggs, slightly incubated; whilst three contained young ones apparently only a day or two old, whose eyes were, however, partially open, showing the lemon-yellow irides. In this case the eggs must have been laid in January; but I can hardly suppose that when, as often happens at this time of year, the streams and ponds are frozen over, they would breed so early. The popular belief was current in the neighbourhood that the old birds hang their legs over the sides of the nests—an uncomfortable proceeding, I should imagine, as the nests

are over two feet in diameter. One man, who had every opportunity of seeing for himself, gravely assured me that the birds made holes in the bottoms of the nests through which they put their legs!—J. YOUNG (64, Hereford Road, Bayswater).

Lesser Spotted Woodpecker near Stockbridge.—On April 2nd I had brought to me, by a keeper, a male Lesser Spotted Woodpecker, which he had shot. I have not heard of one in this neighbourhood before, though some eggs were obtained about three years ago about five miles from here.—JOHN H. WILLMORE (Stockbridge, Hants).

Red-throated Pipit at Brighton.—On the 13th March a Red-throated Pipit, *Anthus cervinus*, was brought to Mr. Swaysland, the well-known naturalist, with a Stonechat and a Meadow Pipit, by a Brighton bird-netter. I saw it the following morning in the flesh; its tail and wings were perfectly uninjured, and it evidently had not been dead many hours. The whole of the breast in this interesting Pipit is richly suffused with bright rufous, and some of this colour extends to the belly, and even to the eyebrows. Mr. Swaysland pointed out that its legs, compared with the Meadow Pipit's (also in the flesh) were darker. This is a character that would be sure to disappear very rapidly, and I fear the beautiful tints on the breast, if not kept from the light, will fade also. As some doubt may well be expressed about what has long been one of the most doubtful birds in the British list, I am glad to be able to add that its identity has been confirmed by Mr. R. B. Sharpe, by whom it was exhibited at the last meeting of the Zoological Society.—J. H. GURNEY, JUN. (Nutwood, Reigate).

Notes on the Ornithology of Northamptonshire.—The Buzzard, *Buteo vulgaris*, hinted at in my last communication to 'The Zoologist,' bearing date November 15th, 1883, was seen during the subsequent fortnight by several persons, and, as far as I know, escaped slaughter in this neighbourhood. The Hon. Thomas W. Fitzwilliam informed me by letter that whilst out with his hounds near Barnwell, Nov. 16th, he sprang two birds from a piece of new-sown wheat which he felt convinced were Solitary Snipes, *Scolopax major*. Mr. Fitzwilliam writes, "I never saw any Snipe half as big before, and as I have done a good deal of Snipe-shooting I am sure that I am not mistaken." This is a late appearance of this species, which is very uncommon with us. A Short-eared Owl, *Strix brachyotus*, was shot near Thrapston, Dec. 1st. I only record this as the first reported to me this autumn, and very unusually late, as we generally meet with this Owl in the third or fourth week of October. A Green Sandpiper, *Totanus ochropus*, was shot at a pond near Clapton, Dec. 6th. We have met with this species in this neighbourhood in every month of the year except June, but never in any numbers, except occasionally in August and September. A Common Gull, *Larus canus*, in immature plumage, was shot on the

river near Thrapston, Dec. 7th, and a Dunlin, *Tringa alpina*, in the same neighbourhood, on the following day. It may seem absurd to record the occurrence of such common birds as these, but we would beg those who are of that opinion to bear in mind that we are treating of the Ornithology of an inland and comparatively small district, and the two last-mentioned species, though neither of them very rare therein, are of some *local* interest. On Dec. 12th, George Trowbridge, gamekeeper to Mr. Freeman, of Clapton, heard strange cries proceeding from high in air overhead, and on looking up saw a large "hawk" (probably a Peregrine) with a large bird shrieking and struggling in its talons; the said hawk was out of shot, but on shouts and demonstrations from the person above named let go its quarry, which was pursued and eventually shot by Trowbridge, and proved to be a very fine specimen of the Oystercatcher, *Hæmatopus ostralegus*, an exceedingly uncommon bird in this neighbourhood in our experience. The above particulars were communicated to me by the Rev. E. P. Williams Freeman, Rector of Clapton, who was also kind enough to present this Oystercatcher to the writer. From the last-mentioned date till now I have been kept entirely to the house by an attack of illness, so that my subsequent notes are mainly from the observations of friends and neighbours. Dr. Tomlinson, of Oundle, reported to me in December that on one of his journeys from that town to visit me, he had seen on the roadside, not far from Barnwell, a Blackbird, *Turdus merula*, "of the colour of a sandy cat." He has often since noticed it about the same spot; its existence seems to be well known to some of our gamekeepers, one of whom, on being asked about the bird by my son, took him to the place and found it at once by the roadside. My son, who had a close view of the bird, describes it as being of the colour of an Australian sovereign; his sight of it took place on Saturday, April 5th, 1884. I received for identification, Jan. 29th, 1884, a young specimen of the Common Puffin, *Fratercula arctica*, from the Rev. G. Nicholson, of Northampton, who informed me that it was brought to him alive on the morning of Dec. 17th, 1883, having been caught by a cottager at Thornby, near Naseby, struggling at his door during a severe storm on the evening of Dec. 12th. This bird was erroneously recorded in the 'Journal of the Northamptonshire Natural History Society,' and (we believe) in one or more of our county newspapers, as a Little Auk, *Mergulus alle*. A good specimen of the Bittern, *Botaurus stellaris*, was shot on our river near Ashton on Jan. 26th, and presented to me in the flesh, by Mr. Samuel Deacon, of Polebrook, on the 30th. Heard of nest of Wood Pigeon, *Columba palumbus*, containing eggs, for the first time this year, March 18th. A Tawny Owl, *Strix aluco*, sitting upon four eggs, allowed the tree in which her nest was situated, unknown to the woodmen, to be felled to the ground without moving; she was taken uninjured, and brought to me, with the only unbroken egg, March 26th. First Wheatear, *Saxicola ænanthe*, of season,

reported by Mr. Hunt, March 22nd. Chiffchaff, *Phyllopneuste minor*, March 27th. Fieldfares, *Turdus pilaris*, and Redwings, *T. iliacus*, travelling northwards in considerable numbers, April 2nd. First Redstart, *Ruticilla phænicura*, of season, reported April 2nd. A nest of Wild Duck, *Anas boschas*, was found by my son on a broken-topped elm tree at about sixteen feet from the ground, April 5th. First Wryneck, *Jynx torquilla*, of season, reported April 7th. A few Woodcocks, *Scolopax rusticula*, still linger about our woods, and are to be seen "glading" at dusk, April 10th. First Ring Ouzel, *Turdus torquatus*, of season, reported by Mr. Hunt, April 11th. First Cuckoo, *Cuculus canorus*, of season, reported April 11th. First Swallows, *Hirundo rustica*, of season, reported April 12th. First reports of Blackcap, *Sylvia atricapilla*, and Willow Wren, *Phyllopneuste trochilus*, this season, April 13th. First report of Sand Martin, *Cotyle riparia*, this season, April 16th. Another nest of Wild Duck, *Anas boschas*, found yesterday in our park in an elm tree, about fourteen feet from the ground.—LILFORD (Lilford Hall, Oundle, April 25, 1884).

Uncommon Birds in Hertfordshire.—During the past year (1883) the following uncommon birds have come under my notice as having occurred in this county, a more extended notice of which I have prepared for 'The Transactions of the Hertfordshire Natural History Society':—A pair of Twites, *Linota flavirostris*, were caught in bird-nets, during the month of December, near the village of Albury, at the foot of the Chilterns, and were exhibited for some time at Mr. Banfield's, bird dealer, Hemel Hempstead. A Hoopoe, *Upupa epops*, in fine plumage, was shot near Digswell, in the parish of Welwyn, in May, by Samuel Gooch, one of the keepers on the Bocket Hall estate, and is still in his possession. The Hoopoe is an irregular spring and autumn migrant. Several specimens have at different times been taken in Hertfordshire, but always at considerable intervals. A "Ringtail," or female Hen Harrier, *Circus cyaneus*, was observed by Mr. Marlborough R. Pryor, at Weston Manor, near Stevenage, on the 28th October, and on one or two subsequent occasions. When only seen upon the wing it is very difficult to distinguish a female Hen Harrier from the female of Montagu's Harrier. Mr. Pryor had a good opportunity of observing the bird in question, and is well acquainted with both species. Both from its general appearance and from the period of the year at which it was seen he believed it was a Hen Harrier, and as such I accept it. A White Stork, *Ciconia alba*, was shot somewhere about the end of July, while resting on the top of a house near Holfield: it was unmistakably identified. On the 28th and 29th of August two large flocks of Dotterel, *Eudromias morinellus*, were reported by Mr. Percy F. Fordham as having been observed at Royston Heath, and on September 24th a single specimen, believed to be a bird of the year, was shot in turnips near Weston Manor, Stevenage, by Mr. Marlborough R. Pryor. The Dotterel is a spring

and autumn migrant. In olden times it was frequently the quarry of falconers, and it is stated that the 10th May was specially devoted to that sport, and was known on the borders of Hertford and Cambridgeshire as "Dotterel's day" (Hone's 'Everyday Book,' 1826, p. 645). It is interesting to notice that Dotterel are still observed in the same district in which they are reported to have been abundant during the reign of James I.—J. LITTLEBOY (Hunton Bridge, Herts).

[We have no doubt that the White Stork above referred to was one of a pair which belonged to Mr. H. D. Astley, of Chequers Court, Tring, and which made their escape. The owner advertised his loss in 'The Field,' and through the medium of that journal ascertained that one of the pair had been shot in Kent (Field, Nov. 18, 1882). He has since obtained another pair, concerning which he has just published the following letter in 'The Standard' of April 22nd:—"May I fill up a little of your valuable space in order to make a request—namely, that should any one see a pair of White Storks, *Ciconia alba*, either on private or public land, they will kindly do their best to protect them, and keep them from being shot at or otherwise molested? My reason for writing this is because a pair of these birds owned by me, which I had allowed full liberty in the hopes of their remaining to rear their young, have flown beyond their boundaries, and having lost their way are now wandering at large, if not already destroyed. They are quite tame, and I cannot think that they intended migrating; for not only are they in full moult, but they showed no signs of restlessness, and were seen lingering all day in a field about two miles off." In a later letter the same gentleman says:—"Since writing you about a pair of White Storks, I have heard that one has been shot, and the other wounded." It is quite possible, therefore, that we may hear of their being reported as notable additions to the avifauna of Hertfordshire. *Verbum sap.—ED.*]

Grey Wagtail nesting in East Devon.—In May, 1880, we found a nest of the Grey Wagtail, *Motacilla melanope*, at Honiton, Devon. The nest was placed about six feet from the ground, in a hole in the stone-work of an old bridge which crosses the river Otter. It contained two eggs of the Grey Wagtail and one of the Cuckoo. My share of the spoil included the two Grey Wagtail's eggs, which I now possess, and my friend had the egg of the Cuckoo, which I am afraid was shortly afterwards broken.—J. R. EARLE (15, Norham Road, Oxford).

Abnormal Eggs of Blackbird.—Last year a Blackbird here laid blue eggs, without a single spot, the blue being almost exactly the depth of a Hedgesparrow's egg. This year she has built within a few yards of the same spot; all her eggs are again clear blue, without a spot. When she had laid three eggs I took one to keep as a curiosity. I then found she had the additional peculiarity that she sat on only the remaining two, and

has continued to do so for over a fortnight. Is not the blue colour rare?—J. H. BUXTON (Hunsdon Bury, Ware).

Notes from N.W. Yorkshire.—When I stated (p. 139) that the Common Gull, *Larus canus*, breeds on Punchard Head, in Arkengarth Dale, I was certainly under the impression that it did so; but on making further enquiries I find that I had entirely misunderstood my informant, who tells me that it is many years since any gulls bred there, owing to their nests being destroyed and the birds shot. He is unable to recollect the colour of their plumage, but most probably they were a small colony of the Black-headed Gull, *Larus ridibundus*. The Common Gull, *L. canus*, is, however, an occasional visitor, and I have myself several times observed it on the moors during the months of May and June.—J. E. TINKLER (Chetham's Hospital, Manchester).

FISHES.

Greater Forkbeard in Devon.—Passing by a fishmonger's shop in Exeter on the 19th March last, amongst a lot of small Whittings, only seven or eight inches in length, I espied a specimen of the Greater Forkbeard, *Phycis blennioides*, Brünn., 8.75 inches in length. The proprietor of the shop obligingly made me a present of the specimen, and informed me that it was taken near the shore in Torbay, not far from Brixham. Bellamy, in his useful little work called 'The Housekeeper's Guide to the Fish-market,' published at Plymouth in 1843, speaks of this fish as "not uncommon." There is a specimen in the British Museum collected at Plymouth by Lieut. H. F. Spence, R.N. Mr. Gatcombe met with it once at Seaton. It, however, appears to be a rare species on the South Devon coast.—W. S. M. D'URBAN (Albert Memorial Museum, Exeter).

[In 'The Field' of April 5th a correspondent reports the capture of a fish of this species in the Firth of Forth on March 28th, and states that it is almost unknown in Scottish waters.—ED.]

ARCHÆOLOGY.

Origin of the name "Oystercatcher."—The name "Oystercatcher" seems to have been unknown to English writers on Ornithology till Catesby, in 1731, made use of it (Nat. Hist. Carolina, i. p. 85), and so far as I can make out it was not until 1776, when Pennant brought out the so-called 4th edition of his 'British Zoology,' that this name replaced the customary "Sea-Pie." Yet I do not profess to declare that the name "Oystercatcher" was a colonial invention. It may have been one of the many English phrases that were common enough at home, but yet did not, as it were, come to the surface until after crossing the Atlantic; and one reason for thinking this possible is that it has its equivalents in the Frisian *Oestervisscher*, the German *Austermann*, and so forth. But, on the other hand, I have no evidence to show how old these names really are; and they

might turn out to be renderings from the English. The French *Huîtrier* certainly looks as if it were taken from Catesby, who wrote in French as well as in English.—ALFRED NEWTON (Magdalene College, Cambridge).

[We should be glad if any other correspondent can throw further light on this subject, and explain the derivation of the provincial name "Olive," which is applied to the Oystercatcher by Albin, and is still in use on the coast of Sussex.—ED.]

"The Sea-blue Bird of March."—In Mr. H. T. Wharton's note upon this subject (p. 117) it would appear that the poet or commentator has rather missed the meaning of "halcyon days." It is quite true that the weather, and consequently the sea, is perfectly calm during the early winter in the Grecian Archipelago; I have known it particularly so for several years about Christmas, at which time we have often had brilliant sunshine and blooming roses. I have also noticed at this time that Kingfishers seemed unusually abundant; in fact, I think that this bird is observed more frequently flitting about the shallow seas and lagoons during a continuance of fine weather than at any other period. I have always understood the term "halcyon days" to mean brilliant weather, when the Kingfisher is likely to be more frequently observed on the move. The term alcyon or halcyon—*i. e.* the Kingfisher—has been supposed by most Hellenists to have some reference to ἄλς, the sea. Mr. Wharton, in the lately published 'Ibis List of British Birds,' says (p. 81), "Etymology unknown; often written *halcyon*, because of the *fancied* derivation from ἄλς, the sea." With all deference to Mr. Wharton, I would suggest that what he terms the *fancied* derivation may be the *real* one, and that it *may* be derived from ἄλς, the sea, and κύανος or κυάνιος = dark blue, that is to say, something a *dark blue sea colour*, almost synonymous with the "Sea-blue Bird." If this be granted, "halcyon days" will have no reference to the Kingfisher, but will mean simply days when the sea is "deeply, darkly, beautifully blue," which, of course, could not happen, save in sunny weather, when the sea reflects the glowing sky.—MONTAGUE BROWNE (Leicester).

SCIENTIFIC SOCIETIES.

LINNEAN SOCIETY OF LONDON.

April 3, 1884.—Sir JOHN LUBBOCK, Bart., M.P., F.R.S., President, in the chair.

Mr. R. Morton Middleton exhibited a Jackdaw, with so much white on the scapulars and secondaries as to cause a considerable resemblance to a Magpie. This bird had been seen and observed for some time at Castle Eden, Durham, prior to its dying from an injury.

Prof. P. M. Duncan gave an abstract of a revision of the families and genera of the Sclerodermic *Zoantharia* (excepting the *Madreporia Rugosa*). He stated that no systematic work having been written on the *Madreporaria* since that of MM. Milne-Edwards and Jules Haime (1857—60), and a great number of genera having been since described, a necessity had arisen for a revision of the classification. This necessity was the more apparent in consequence of the morphological work of Dana, L. Agassiz, Verrill, and H. N. Moseley. The old sections of the Zooantherian suborder required modifications and additions. The sections *Aporosa* and *Perforata* would remain, shorn of some genera, the old family *Fungida* becoming a section with three families, two of which are transitional between those just mentioned. The section *Tabulata* disappears, some genera being placed in the *Aporosa*, and others relegated to the *Hydrozoa*, according to Moseley. The *Tubulosa* cease to be Madreporian. Hence the sections treated are *Madreporaria aporosa*, *M. fungida*, and *M. perforata*. The nature of the hard and soft parts of these forms is considered in relation to classification, and an appeal is made to naturalists to agree to the abolition of many genera, the author having sacrificed many of his own founding. The criticism of the 467 genera permits 336 to be good, and as a moderate number (thirty-six) of subgenera are allowed to continue, the diminution is altogether about 100. The genera are grouped in alliances, and the plan seems to be useful. The object of the classification proposed is to simplify, many old and artificial divisions being dispensed with.

A paper was read by Mr. Francis J. Briant, "On the Anatomy and Functions of the Tongue of the Honey Bee (worker)." The author, after referring to the structure of the more conspicuous parts of the endoskeleton and relations of the tongue thereto, treats specially of the manner in which the bee takes up the honey by its tongue. It appears that upon the nature and function of the organ in question authorities are by no means agreed. Kirby and Spence, supported by Huxley, and partly by Newport, aver that the bee laps up its food, while Hermann Müller and others rather attribute the action as due to the terminal whorl of hairs to which the honey adheres, and therefrom is withdrawn upwards. The author of the paper, from experiment and otherwise, is inclined to the view that the honey is drawn into the mouth through the tongue by means of a complicated pumping action of the organ itself, aided by the closely contiguous parts.

April 17, 1884.—ALFRED W. BENNETT, M.A., in the chair.

Mr. Robert Lloyd Patterson, of Belfast, and Mr. Benjamin Lomax, of Brighton, were elected Fellows.

The only zoological paper read was by Mr. R. Bowdler Sharpe, namely, his ninth contribution to the Ornithology of New Guinea, in which he

described several new birds obtained by Mr. A. Goldie from the Astrolabe Mountains.—J. MURIE.

ZOOLOGICAL SOCIETY OF LONDON.

March 18, 1884.—Prof. W. H. FLOWER, LL.D., F.R.S., President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during the month of February, and called special attention to a young specimen of the Red-eared Monkey, *Cercopithecus erythrotis*; a fine example of Martin's Monkey, *C. Martini*; and an example of a rare Ichneumon from Ceylon, MacCarthy's Ichneumon, *Herpestes MacCarthyæ*, all new to the collection.

Mr. Tegetmeier exhibited specimens showing a variation in the colour of the feet of the Pink-footed Goose, *Anser brachyrhynchus*.

A communication was read from Sir Richard Owen on the extinct birds of the genus *Dinornis*, forming the twenty-fifth of his series of memoirs on this subject. The present paper gave a description of the sternum of *Dinornis elephantopus*.

Mr. J. B. Sutton read an account of the results of his investigations of the more important diseases which affect the carnivorous animals living in the Society's Gardens.

Mr. J. W. Clark exhibited and read an account of three skulls of a Sea-Lion from the east coast of Australia. The largest, that of an adult male, had been exhibited, together with the stuffed skin, at the Fisheries Exhibition last year, where it had been named *Arctocephalus cinereus*, Gray. The object of the paper was to trace the history of the species, for which the name *Otaria cinerea* had been suggested by Péron in 1816, and to show, by comparison with the type skull at Paris, that these specimens had been rightly referred to it.

A communication was read from the Rev. O. P. Cambridge, in which he gave descriptions of two new genera of Spiders, proposed to be called *Forbesia* and *Regillus*.

April 1, 1884.—Prof. W. H. FLOWER, LL.D., F.R.S., President, in the chair.

Prof. Flower exhibited and made remarks on a series of skulls of the Bottle-nosed Whale, *Hyperoodon rostratus*, illustrating the various stages presented by this animal as regards the conformation of its skull in the different ages of both sexes. Prof. Flower also exhibited, on behalf of Messrs. Langton and Bicknell, a specimen of spermaceti obtained from the head of the *Hyperoodon*.

Mr. Schlater exhibited and made remarks on specimens of the eggs of

two species of Testudinata, *Testudo elephantopus* and *Chelys matamata*, recently laid by animals living in the Society's Gardens.

Mr. R. Bowdler Sharpe exhibited and made remarks on a Red-throated Pipit, *Anthus cervinus*, caught near Brighton in March last. Mr. Sharpe exhibited at the same time an example of the Water Pipit, *Anthus spinoletta*, captured at Lancing, in Sussex, in March, 1877.

Prof. E. Ray Lankester exhibited and made remarks on a large living Scorpion, *Buphus cyaneus*, from Ceylon.

A communication was read from Prof. T. Jeffrey Parker, being the first of a series of studies in New Zealand Ichthyology. The present paper gave a description of the skeleton of *Regalecus argenteus*. The species was founded on a specimen cast ashore at Moeraki, Otago, in June, 1883.

A communication was read from Viscount Powerscourt, containing an account of the origin and progress of the herd of Japanese Deer at Powerscourt.

A communication was read from Mr. G. A. Boulenger, giving the diagnoses of some new Reptiles and Batrachians from the Solomon Islands, collected and presented to the British Museum by Mr. H. B. Guppy, of H.M.S. 'Lark.'

A communication was read from Mr. C. O. Waterhouse, containing an account of the Coleopterous Insects collected by Mr. H. O. Forbes in the Timor-Laut Islands.

Mr. F. D. Godman read a paper containing an account of the Lepidoptera collected by the late Mr. W. A. Forbes on the banks of the Lower Niger, the Rhopalocera being described by Messrs. F. D. Godman and O. Salvin, and the Heterocera by Mr. H. Druce. The species of Butterflies were fifty in number, and comprised representatives of all the families of Rhopalocera hitherto known from Tropical Africa, except the *Erycinidæ*, a group but feebly developed in this region.

Mr. R. Bowdler Sharpe read the description of three rare species of Flycatchers, viz., *Alseonax minima*, *Lioptilus abyssinicus*, and *L. galinieri*. Mr. Sharpe also described an apparently new species of Nuthatch, discovered by Mr. John Whitehead in the mountains of Corsica, and proposed to be called *Sitta Whiteheadi*.

Mr. G. E. Dobson read a paper on the myology and visceral anatomy of *Capromys melanurus*, of which rare mammal specimens had been lately obtained for him by Mr. F. W. Ramsden, H.M.'s Consul at St. Jago de Cuba. The well-known division of the hepatic lobes into minute lobules in *C. pilorides* from the same island was shown not to exist in *C. melanurus*, which otherwise closely resembled the former species, and this character could therefore no longer be considered a generic one.—P. L. SCLATER, Secretary.

